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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/643,166

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Jin-han Kim

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EXAMINER

NGUYEN, LINH THI

ART UNIT

PAPER NUMBER

2627

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/643,166	Applicant(s) KIM ET AL.	
	Examiner LINH T. NGUYEN	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-9,13,17,21-25,29,33-42,47-50 and 59-69 is/are pending in the application.
- 4a) Of the above claim(s) 33-42 and 59-63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-9,13,17,21-25,29,47-50 and 64-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/28/08 has been entered.

Election/Restrictions

Claims 33-42 and 59-63 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made with traverse in the reply filed on 7/31/06.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-9, 17, 21-25, 47-50, and 64-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al (US Publication number 20020110067) in view of applicant admitted prior art (APAA).

In regards to claims 1, 17, 43 and 51, Kondo et al discloses a method, apparatus, and computer program to modulate address data of a disc type recording medium (Paragraph [0161]), the method comprising: generating the address data (Figs. 9-12); performing error correction coding of the address data and outputting coded address data (Paragraph [0164], the data are accompany by ECC); receiving the coded address data, generating a unit wobble signal of the coded address data (Figs. 9-12), and wherein a first portion of the unit wobble signal is modulated by using a first type and second type of a first modulation method and a second portion of the unit wobble signal is modulated by using a first type and a second type of a second modulation method (Paragraph [0187], lines 10-15; Figs. 9-12, since it is only 5 bits of an address and a unit wobbles is at least 4 different unit wobble signals, therefore, the address of figs. 9-12 is only 5 different unit wobble signals). However, Kondo et al does not disclose wherein the unit wobble signal is alternatively one of at least four different unit wobble signals and has N carriers,

In the same field of endeavor, AAPA discloses wherein the unit wobble signal is alternatively one of at least four different unit wobble signals and has N carriers (Paragraph [0007]). At the time of the invention it would have been obvious to person of ordinary skill to art to modify 2 different modulations in first and second modulation method of Kondo et al to have at least 4 wobble signals in a wobble unit with N carriers as suggested by AAPA. The motivation for doing so would have been to define each bit of address data.

In regards to claims 8, 44 and 52, Kondo et al discloses the method and apparatus, wherein the generation of the first modulated signal comprises generating a signal using the first

modulation technique indicating each bit value of the coded address data (Fig. 9, shows an amplitude modulation of coded address data) and generating the second modulated signal using the second modulation technique by generating a signal indicating each bit value of the coded address data (Fig. 10, shows a frequency modulation of the coded address data).

In regards to claims 45, and 53, Kondo et al discloses the method and apparatus, wherein the generation of the first modulated signal comprises, using the first modulation technique, generating a predetermined pattern signal if a bit value of the coded address data is equal to a first bit value and not generating the predetermined pattern signal if the bit value of the coded address data is equal to a second bit value (Paragraph [0167]), and generating the second modulated signal using the second modulation technique by generating the signal indicating each bit value of the coded address data (Figs. 9-12).

In regards to claims 46 and 54, Kondo et al discloses the method and apparatus, wherein the generation of the first modulated signal comprises generating a signal using the first modulation technique to distinguish signals indicating each bit value from one another (Figs. 9-12), and generating the second modulated signal using the second modulation technique by generating signals having different lengths for each at least two-bit values of coded address data (Fig. 13 and Paragraph [0194]).

In regards to claims 5, 21, 47 and 55, Kondo et al discloses the method and apparatus, wherein the generating of the unit wobble signal comprises generating at least two pattern signals

indicating at least two-bit values of the coded address data using the first modulation method (Paragraph [0192] and [0194]), and generating at least two signals used to distinguish signals indicating a bit value of the address data using the second modulation method (Paragraph [0192], lines 12), where the coded address data of at least two bits is indicated by disposing the at least two pattern signals in predetermined locations and inserting the at least two signals to distinguish signals indicating a bit value of the address data between the at least two pattern signals (Paragraphs [0194]).

In regards to claims 6, 22, 48 and 56, Kondo et al discloses the method and apparatus, wherein the generating of the unit wobble signal comprises disposing the first portion of the unit wobble signal and the second portion of the unit wobble signal adjacent to each other (Figs. 9-10).

In regards to claims 7, 23, 49 and 57, Kondo et al discloses the method and apparatus, wherein the generating of the unit wobble signal comprises alternating the first portion of the unit wobble signal and second portion of the unit wobble signal (Paragraph [0187]).

In regards to claims 8, 24, 50 and 58, Kondo et al discloses the method and apparatus, further comprising: generating signals indicating each bit of the coded address data (Figs. 9-12).

In regards to claims 9 and 25, Kondo et al discloses the method, further comprising: generating a signal indicating a start of the coded address data using one of the first modulation

method and second modulation method and a third modulation method (Paragraph [0167], sub information is start of an address data).

In regards to claims 65, 67, and 69, Kondo et al discloses the method, wherein the unit wobble signal comprises 2 bits (Figs. 13-14).

In regards to claim 64, 66, and 68, Kondo et al does not but AAPA discloses the method wherein N is 56 (Paragraph [0007], lines 17-18). At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the method of modulating an address data on the disk of Kondo et al to include 56 carrier signals in a unit of wobble signal. The motivation for doing so would have been to set an amount of data in one block.

Claims 13 and 29, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo et al '067 in view of AAPA in further in view of Kondo et al '934 (US Publication number 20050099934).

In regards to claims 13 and 29, Kondo et al'067 and AAPA do not but Kondo et al '934 discloses the method and apparatus, wherein the first modulation method is binary phase shift keying (BPSK) and the second modulation method is frequency shift keying (FSK) (Paragraph [0135]). At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the method of modulation of Kondo et al '067 and AAPA to have a modulation technique of FSK and BPSK as suggested by Kondo et al '934. The motivation would have been to be able to control the speed of the motor, which rotates the disk.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH T. NGUYEN whose telephone number is (571)272-5513. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thang V. Tran/
Primary Examiner, Art Unit 2627

LN
April 24, 2008